

Work Order ID 108877

October-29-13 10:12:50 AM

108877

Page 1

Item ID: 649.5110

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Wiper Deflector

Start Date: 11/05/13 Start Qty: 30.00

30

Cust Item ID:

Required Date: 11/05/13 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals: Process Plan: MLS Date: 11-10-30

Tooling: Date: _____

Run Start *NR1*

QC: _____ Date: _____

SPC (Y/N): _____ Date: _____

Stop *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr <u>649.5110</u> <u>649.5100</u> | Revision Nbr <u>A</u> | | | | | | | | |
| 100 | BAND SAW | 0.00 | | | | | | | |
| *100* | | | | | | 30 | | | 11-28 |
| Bandsaw | Memo | 0.00 | | | | | | | |
| Jeaspa Bandsaw | Cut Blank at 4.625" | | | | | | | | |
| 110 | HAAS CNC VERTICAL MACHINING #1 | 0.00 | | | | | | | |
| *110* | | | | | | 30 | | | 11-29 |
| HAAS 1 | Memo | 0.00 | | | | | | | |
| HAAS CNC vertical machine #1 | 1-Machine per folio FB214 DWG REV: <u>A</u> FOLIO REV: <u>AA</u> | | | | | | | | |
| | 2- deburr and break all sharp edges | | | | | | | | |

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | | | | | |
|--|--|--|--|--|---|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td style="width: 33%;"> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </td> <td style="width: 33%;"> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </td> <td style="width: 33%;"> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </td> <td style="width: 33%;"> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </td> </tr> </table> | Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> | Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> | Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> | Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> |
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| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | | |
|--|--|---|--|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |
|--|--|---|--|

Work Order ID 108877

October-29-13 10:12:50 AM

108877

Page 2

Item ID: 649.5110

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Wiper Deflector

Start Date: 11/05/13 Start Qty: 30.00

30

Cust Item ID:

Required Date: 11/05/13 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals: Process Plan: Date:

Tooling: Date:

Run Start ***NR1***

QC: Date:

SPC (Y/N): Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursTool ID Tool # Plan
Code Accept Reject Reject Insp.
Qty Qty Number Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.00

Quality Control

30 0 13-11-29

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

on 13/11/29

30 0

140

Outsource process-Anodize per QSI017 4.1.10.1

0.00

140

Outsource4

Memo

0.00

Outsource process - Anodize

Issue P/O to ATG : 22290

1- Black Anodize as per Dwg 649.5100

2- PRIME AS PER DWG, SEE NOTE #2

Certification of Conformity is required

CZ 13/12/04 (30)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | | | | | | | | | | | | | | | | | |
|--|--|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | |
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| Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | | | | | | | | | | | | | | | | |

| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | | |
|--|--|---|--|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |
|--|--|---|--|

Work Order ID 108877

October-29-13 10:12:50 AM

108877

Page 3

Item ID: 649.5110

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Wiper Deflector

Start Date: 11/05/13 Start Qty: 30.00

30

Cust Item ID:

Required Date: 11/05/13 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

Receive & Inspect for Damage & Mat'l Certs

0.00

150

Packaging

Memo

0.00

Packaging

30x

B-12-30.

SP.

155

QC5- Inspect part completeness to step on W/O

0.00

155

QC

Memo

0.00

Quality Control

30

M/M 14-01-15

180

Identify as per dwg & Stock Location: 31544A 0.00***180***

Packaging

Memo

0.00

Packaging

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

30x

DAS
28
9-89

14-01-17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | | | | | |
|--|--|--|--|--|---|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td style="width: 33%;"> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </td> <td style="width: 33%;"> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </td> <td style="width: 33%;"> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </td> <td style="width: 33%;"> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </td> </tr> </table> | Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> | Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> | Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> | Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> |
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| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | | |
|--|--|---|--|
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|--|--|---|--|

Work Order ID 108877***108877***

Page 4

October-29-13 10:12:50 AM

Item ID: 649.5110

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Wiper Deflector

Start Date: 11/05/13 Start Qty: 30.00

30

Cust Item ID:

Required Date: 11/05/13 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 190 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |
| *190* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

14-01-17

(H) 14-01-17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | | | | | | | | | | | | | | | | | |
|--|--|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | |
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| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | |
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| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence |
| | | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge |
| | | <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |

Picklist Print

October-29-13 10:12:50 AM

Page 1

Work Order ID: 108877
Parent Item: 649.5110
Parent Item Name: Wiper Deflector

Start Date: 11/05/13 Required Date: 11/05/13
Start Qty: 30.00 Required Qty: 30.00

Comments: IPP REV A NEW ISSUE R.Q. 13/10/03 VERIFIED BY: J.F.S.

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M7075T6B1.500X1.500 | | Purchased | No | | | 100 | f | 2.0350 | 0.385 | 12.157896 | | | |
| 7075T6BAR1.500X1.500 | | | | | | | | | | | | | |

SI 13-11-29

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| MAT049 | 2.035 | |
| 123610 | 0.302 | |
| 124030 | 0.525 | |
| 125363 | 0.54 | |
| m126705 | 0.668 | |

127539

12.0

M7075T6B1.500X1.500
M127539

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | | | | | | | | | | | | | | | | | |
|--|--|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | |
| Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | | | | | | | | | | | | | | | | |

| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | | |
|--|--|---|--|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |
|--|--|---|--|

| | | | | | |
|---|-------------------------------------|---|-----------------------|-------------------|---|
| APICAL INDUSTRIES, INC. | ENGINEERING CHANGE NOTICE NO. 03525 | | | SHEET 1 OF 2 | |
| | DWG NO. 649.5100 | REV: A | PREPARED BY A. QUAN | DATE: 05/24/12 | EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC. |
| | DWG TITLE: WIPER DEFLECTORS | | | | |
| APPROVED BY: ENGR. <i>[Signature]</i> | | MFG. <i>[Signature]</i> | QC <i>[Signature]</i> | EFFECT NEXT ORDER | |
| TRANSACTION CODES (TC) A-ADD R-REVISE | C-CREATE D-DELETE | REASON: REVISED PART DIMENSIONS, ADDED RADIUS | | | |

SHEET 1, ZONE A1 IS:

NOTES

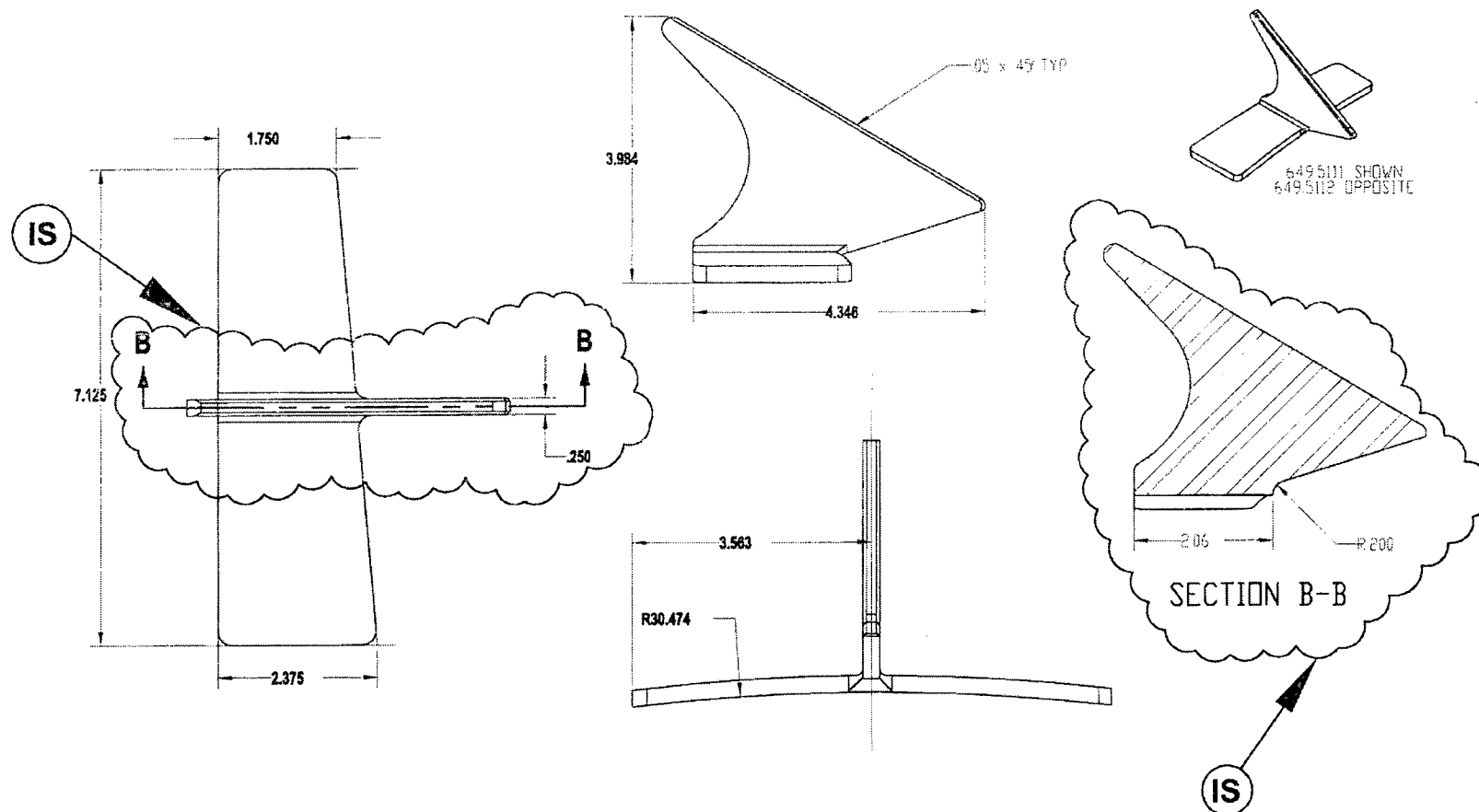
- 1 MATERIAL ALUMINUM 7075-7651 PER AMS-QQ-A-250/12.
- 2 FINISH: ANODIZE PER MIL STD-A-8625, TYPE III, CLASS 2, COLOR BLACK.
PRETREAT PRC-DESOTO PR-148 ADHESION PROMOTER,
PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 PART CONTROLLED BY CAD MODEL
FILE NAME: 649.5110 WIPER DEFLECTORSLDPRT, LAST MODIFIED 12/07/11
- 4 PART CONTROLLED BY CAD MODEL
FILE NAME: 649.5111 WIPER DEFLECTORSLDPRT, LAST MODIFIED 04/11/12
- 5 PART CONTROLLED BY CAD MODEL
FILE NAME: 649.5112 WIPER DEFLECTORSLDPRT, LAST MODIFIED 05/24/12.
- 6 DEBURR AND BREAK ALL SHARP EDGES.
- 7 IDENTIFY IAW MPP-120. LASER ETCH P/N REVISION, 12 PT. CENTURY GOTHIC

108877 MJS
13-10-30

IS

| | | | |
|---------------------|--|---|--|
| DOCUMENTS EFFECTED: | <input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRU <input type="checkbox"/> ICA <input type="checkbox"/> BOM | CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR | DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |
|---------------------|--|---|--|

SHEET 2, ZONE B5 IS:

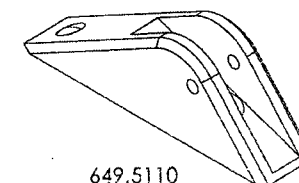


THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN PART OR WHOLE WITHOUT WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

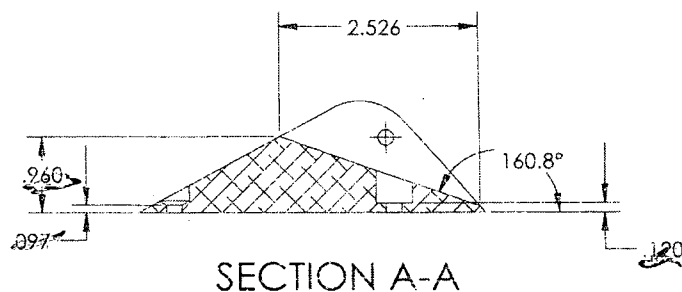
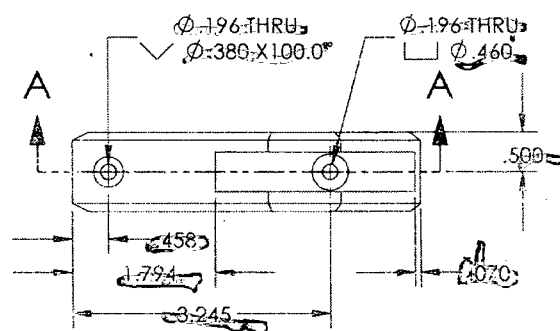
NOTES:

1. MATERIAL: ALUMINUM 7075-7651 PER AMS-QQ-A-250/12.
2. FINISH: ANODIZE PER MIL-STD-A-8625, TYPE III, CLASS 2, COLOR BLACK. PRETREAT PRC-DESOTO PR-148 ADHESION PROMOTER. PRIME IAW MIL-P-23377J TYPE I CLASS N.
3. PART CONTROLLED BY CAD MODEL
FILE NAME: 649.5110 WIPER DEFLECTOR.SLDPRT, LAST MODIFIED 12/07/11.
4. PART CONTROLLED BY CAD MODEL
FILE NAME: 649.5111 WIPER DEFLECTOR.SLDPRT, LAST MODIFIED 04/11/12.
5. PART CONTROLLED BY CAD MODEL
FILE NAME: 649.5112 WIPER DEFLECTOR.SLDPRT, LAST MODIFIED 04/11/12.
6. DEBURR AND BREAK ALL SHARP EDGES.
7. IDENTIFY IAW MPP-120. LASER ETCH P/N REVISION, 12 PT. CENTURY GOTHIC.

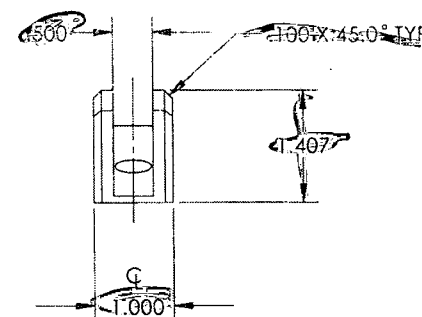
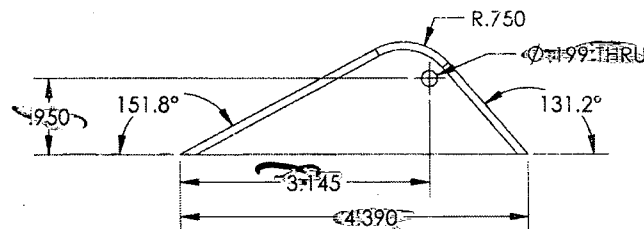
| REVISIONS | | | |
|-----------|-----------------------------|----------|----------|
| REV. | DESCRIPTION | DATE | APPROVAL |
| 1 | LAST PROTOTYPE REVISION RPT | 12/07/11 | P. BRAVO |
| 2 | INITIAL RELEASE | 04/11/12 | P. BRAVO |
| 3 | INCORPORATED ECN 03525 | 04/11/12 | P. BRAVO |



649.5110



SECTION A-A



UNINCORPORATED ECN(s)

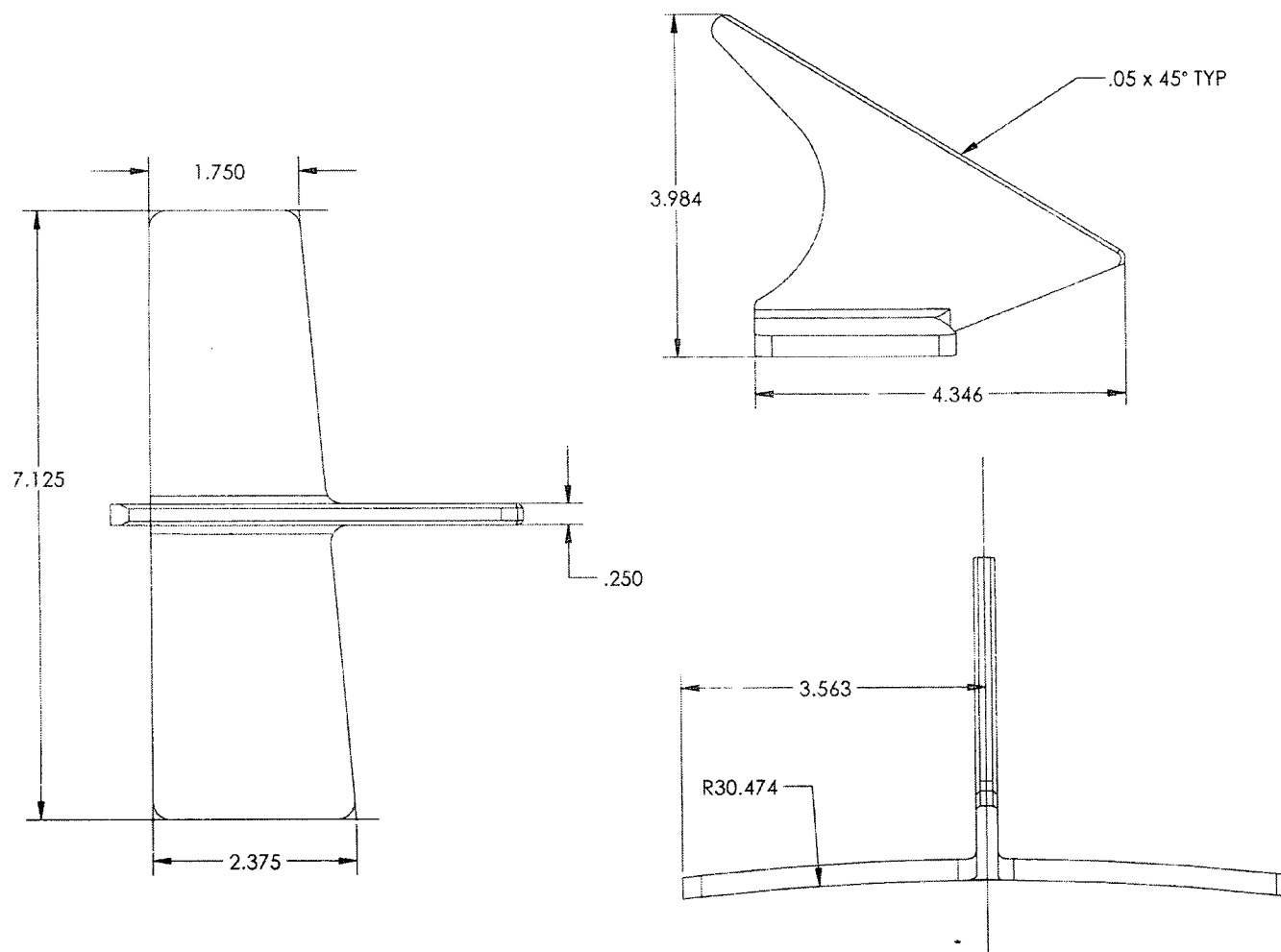
03525

| QTY | FIND # | PART # | DESCRIPTION | MATL | SPEC. |
|---------------|--------|----------|--|-----------------|-------|
| 3 | | 649.5112 | RH WIPER DEFLECTOR | △ | △ △ △ |
| 2 | | 649.5111 | LH WIPER DEFLECTOR | △ | △ △ △ |
| 1 | | 649.5110 | WIPER DEFLECTOR | △ | △ △ △ |
| PARTS LIST | | | | | |
| NEXT ASSY (S) | | | APICAL INDUSTRIES | | |
| 649.4700 | | | 2608 TEMPLE HEIGHTS DR. | | |
| | | | OCEANSIDE, CA. 92056-3512 (760) 724-5300 | | |
| | | | WIPER DEFLECTORS | | |
| | | | SHEET 8 | WIPER NO. 07M26 | REV A |
| | | | SCALE NONE | | |
| | | | SHEET 1 OF 2 | | |

108877

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| REVISIONS | | | |
|-----------|-------------|------|----------|
| REV. | DESCRIPTION | DATE | APPROVED |
| | | | |
| | | | |



| | | | |
|--|-------------------------|--|--------|
| ORIGINAL DATE (MM-DD-YY) 12-01-11 | | APICAL INDUSTRIES | |
| DRAWN BY CHECKER A. QUINN P. BOYD | | 2608 TEMPLE HEIGHTS DR. | |
| DRAWING APPROVAL P. BOYD 12/01/11 | | OCEANSIDE, CA. 92056-3512 (760) 724-5300 | |
| CONTRACT NO. | | WIPER DEFLECTORS | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 2 PLACE DECIMALS ±.03 3 PLACE DECIMALS ±.010 ANGLE ±.5° | SHEET CAGE CODE B 07M26 | DWG NO. 649.5100 | REV. A |
| SCALE NONE | | SHEET 2 OF 2 | |

| | | |
|--|--|-----------------------------|
| DART AEROSPACE LTD | | Work Order: 108877 |
| Description: wiper deflector | | Part Number: 649.510 |
| Inspection Dwg: 649.510 Rev: A | | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|----------------|------------------|--------|--------|----------------------|----------|
| Ø 196 | +0.05 -0.00 | 197 | / | | Verin | DL-10 |
| 380X100° | +0.10 ± -5° | 375X100° | / | | - | |
| 460 | +0.10 | 461 | / | | - | |
| 500 | +0.10 | 499 | / | | - | |
| 070 | +0.10 | 077 | / | | - | |
| 3.245 | +0.10 | 3.246 | / | | | |
| 1.794 | +0.10 | 1.794 | / | | HG | |
| 458 | +0.10 | 459 | / | | | |
| 960 | +0.10 | 960 | / | | Verin | RWC-02 |
| 097 | +0.10 | 090 | / | | | |
| 120 | +0.10 | 122 | / | | | |
| 950 | +0.10 | 950 | / | | | |
| Ø 199 | +0.05 -0.00 | 201 | / | | | |
| 4390 | +0.10 | 4390 | / | | | |
| 3.145 | +0.10 | 3.145 | / | | HG | |
| 500 | +0.10 | 501 | / | | | |
| 100X45° | +0.10 ± -5° | 100X45° | / | | | |
| 1.407 | +0.10 | 1.407 | / | | | |
| 1.000 | +0.10 | 1.000 | / | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | | |
|------------------------|-------------------------------|------------------------------|
| Measured by: SL | Audited by: <i>amf</i> | Preliminary Approval: |
| Date: 13-11-28 | Date: 13/11/29 | Date: |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|----------------------------|------------|----------|
| E | 10.04.14 | Added preliminary approval | KJ | |

10.04.15

Regis Quenneville

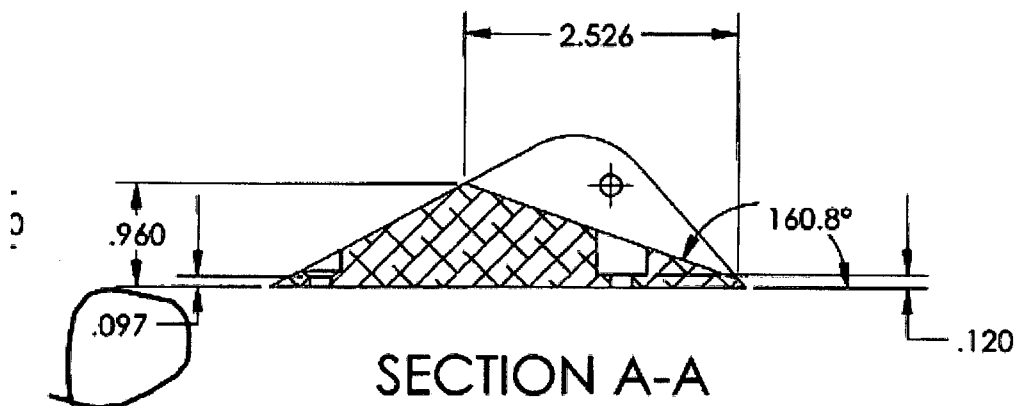
From: Pablo Bravo
Sent: December-02-13 9:37 PM
To: Jean-Luc Menard
Cc: Regis Quenneville
Subject: RE: 649.5110

JL,
The deviation is acceptable.

-Pablo

From: Jean-Luc Menard
Sent: Monday, December 02, 2013 5:25 AM
To: Pablo Bravo
Cc: Regis Quenneville
Subject: 649.5110

Hi Pablo,
Would need a deviation if acceptable on these parts, .097" dim is coming in at .072"-.080".
Let me know if this is acceptable,
JL



.500 — | — | — .100 X 45.0° TYP

UNIN

03525



A.T.G. Industries Inc.
 731, rue Industrielle Rd.
 PLATING DEPARTMENT
 Rockland, On K4K 1T2
 Canada
 Ph: (613) 446-4544
 Fax: (613) 446-4556

Pack List

Number: 62801

Date: 23-Dec-13

To

DART AEROSPACE LTD
 1270 ABERDEEN ST.
 HAWKESBURY, ON K6A 1K7
 Canada

Ship To

DART AEROSPACE LTD
 1270 ABERDEEN ST.
 HAWKESBURY, ON K6A 1K7
 Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

| Terms | | Ship Via | |
|----------|---|----------------------------|--|
| | | | |
| Quantity | Description | | |
| 1 lot | Part: ASST 15 PCS D3299-3 (1.10) BLUE ANODIZE MIL-A-8625 TYPE II CLASS 2 21 PCS D4410-13 (0.90) BLACK ANODIZE MIL-A-8625 TYPE II CLASS 2 4 PCS 647.0310 (10.80) 12 PCS 647.1914 (7.00) 42 PCS 649.5110 (7.30) 5 PCS D4821-1 (50.25) 6 PCS D4823-1 (11.15) 6 PCS D4824-1 (13.40) 6 PCS D4838-1 (10.25) 7 PCS D4838-2 (10.25) 6 PCS D4842-1 (10.85) 4 PCS D4842-3 (10.25) 4 PCS D4842-4 (10.25) HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PRICE IS PER PIECE Job: 20130786 | Rev: PO: 22290 Line: | |



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 62801

Date: 23-Dec-13

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To


DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

| Terms | | Ship Via |
|----------|---|----------|
| Quantity | Description | |
| | Certificate of Conformance | |
| | A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. | |
| | ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY | |
| | DATE : <u>23/12/13</u> | |
| | CERTIFIED SIGNATURE : <u></u> | |
| | RECEIVER SIGNATURE : _____ | |